DRAFT PROPOSAL:

OpEd: Green Energy Substitution Would Collapse Oil Prices

Larger Incentives for Green Vehicles Would Cause Declining Oil Prices:
Give the Job to a Regulated Private/Public investment Coalition

Crude oil hit the highest price ever in 2008. Global consumption had climbed from 74 million barrels daily in 1998, to over 86 million. By early 2006, OPEC was producing at capacity with no significant remaining curtailed production, and the oil price took flight. By the summer of 2008, the oil price paid by US refineries climbed to over $130 per barrel.

But in the fall of 2008, an economic downturn caused a slight drop in global demand of just over 2 million barrels daily within six months. With this small decline of just over two percent, the oil price collapsed below $40, a fall of 70%.

The IMF staff studied crude oil price changes over a twenty-year period, and published estimates for price elasticity of demand. The short-term elasticity of -0.02 indicates that oil price should drop about 50% for a one percent demand decline (with a statistical ten percent probability that the drop could be less than 35%). The IMF long-term elasticity estimate of -0.07 implies that a permanent one percent demand reduction would reduce oil prices 14% even after twenty years.

Essentially, the data indicate that a small permanent decline of 2-3% in demand should cause a 60-70% drop in oil prices, and the lower oil price should prevail for years if demand remains at the reduced level. If the demand for oil steadily declined over time, the oil price would fall under $40 per barrel, and possibly could eventually fall below $30.

Absent another serious global recession, a permanent demand decline of over 3% would take five years to accomplish using an aggressive conservation and substitution program, but the declining oil price eventually would save global oil customers about $1.5 trillion annually. The lower oil price would curtail exploration for high cost oil in frontier areas (like the Arctic), and slow investments increasing production of high cost oil (like tar sands oil).

What does this mean to consumers?

This cost for incremental oil consumption, makes it the most expensive transportation energy choice. Deploying growing numbers of conventional gasoline and diesel vehicles (CVs) drives oil demand into a “red zone”, the last 3-4 million BPD just below the world’s oil production capability of 90 million BPD. Each CV added to the fleet, that helped push demand up through the red zone, increases global oil products customers’ fuel costs about $200,000 over the vehicle lifetime.

Probably the most likely action to permanently reduce oil demand involves increasing deployment of green vehicles such as battery electric vehicles (BEVs) or biofuel vehicles to displace CVs. If reduced demand causes an oil price drop consistent with the IMF estimates, then global oil customers would save far more money than the cost of subsidizing green vehicle substitutes. To reduce oil demand by 3% requires a

deployment of 50-60 million green vehicles into the global vehicle fleet. Hitting this level by the end of 2020 requires a ramp in annual green vehicle sales to over eight million in North America, matched by a similar number of green vehicles sales in foreign markets.

Since deploying green vehicles costs much less than deploying incremental CVs that pushes oil demand up against supply constraints, significant substitution should happen. But so far, green vehicles have made only very small inroads.

So why aren't green vehicles penetrating the market rapidly?

The problem: neither the customer of a green vehicle, nor the manufacturer, nor the biofuel producer, receives the lion's share of the fuel savings caused by deploying the vehicles. For example, customers who buy a BEV save $15,000 to $20,000 in lifetime fuel costs, compared to much higher cost savings (about 10X higher) realized by other customers who continue buying gasoline, diesel, jet fuel, and other oil products that fall in price due to lowered oil demand.

Large oil consuming countries should provide larger incentives to quickly ramp substitutes to reduce oil demand below the red zone. Governments of major oil consuming countries around the world provide incentives for green vehicles, but the current incentives max out at $7000-$8500 per vehicle. Free market ideologues have targeted these meager incentives for elimination. But providing higher incentives (for example, $20,000 per vehicle), would increase green vehicle sales substantially; and reduce oil costs much more than the incentives cost. Investing in increased green vehicle incentives should result in an excellent return, provided there is a means to capture a portion of the oil cost savings.

Many alternative substitutes to crude oil can compete for funding. Most substitutes like electric vehicles or biofuels, cost far less than the incremental cost of crude oil in the red zone. Selecting and providing well-designed incentives to rapidly increase substitution and reduce oil demand, requires a skilled organization dedicated to this task. Government agencies could attempt this, and currently governments use moderate green vehicle incentives, plus regulations to improve gasoline/diesel vehicle efficiency. But the cost savings from substitution justifies much higher investments than currently expended, and a rapid ramp of green vehicle deployment. This sort of program isn't something that government agencies do well.

A better proposal uses a primarily private-sector organization, the "green vehicle group", to fund the best alternatives. This group invests its own capital to provide green vehicle incentives and invest in subsidies for other means of reducing oil demand, and can act more quickly and decisively than the federal government. The group would continually evaluate and shift investments to drive oil demand down. Some government participation/ownership, particularly by some states, makes sense, but the group should operate like a regulated private enterprise.

How does the green vehicle group recapture investments that reduce oil demand?

The group must receive a portion of customer savings to continue investing. The proceeds from a tax on crude oil price declines (set at 30-50% of the reduction in crude

oil price from the trend forecast) would sufficiently compensate the group. Initially the group receives low revenue, due to small declines in prices during the early ramp. But as accumulated investment increases the number of green vehicles in the fleet, eventually oil prices decline significantly, and revenue grows substantially. The more aggressively the group invests, the sooner oil prices decline, and the more rapidly revenue increases to the breakeven point, and the sooner the group begins receiving profitable cash flow.

The group has a strong incentive to invest intelligently and fund the most effective substitutes, but also the group should justify expenditures to government oversight organizations. The group should demonstrate progress in four critical customer-focused needs: energy costs, environmental issues, national security concerns, and economic growth contribution.

In North America, we should attempt to replace about 50-60 million vehicles and target 20% fleet penetration by the end of 2020, compared to the 2-3% penetration in most current forecasts. We should rapidly ramp to deploy over 8 million green vehicles annually. Each year of delay beginning this accelerated ramp costs American oil customers more than $1 trillion over the lifetime of the CVs deployed annually (instead of green vehicles).

Other countries should use similar policies and adopt similar green vehicle incentives, since the economic benefits apply globally.

How do we get a green vehicle group started?
The best method recruits companies to invest in a Green Energy Coalition.

The Green Energy Coalition is a predominantly private sector enterprise with the mission of taking corrective actions to fix currently dysfunctional energy markets, to please customers in energy and related products/services and address climate change concerns. The Coalition will invest in incentives to develop and deploy products and services to substitute for fossil fuels and increase carbon sinks.

The Green Energy Coalition should recruit major investors, particularly businesses that can supply critical skills assessing and providing solutions in the green energy sector. The current goal is to raise $20 billion from qualified investors, with a stretch goal of raising over $80 billion within five years. The Coalition targets investment from potential major suppliers to the green power, green vehicles, biofuels, agriculture, and water resource sectors.

Eventually, the Green Energy Coalition will also target investment from governments, particularly state governments in regions where the green energy industry will contribute substantially to economic growth.

A large number of companies would invest to participate in a group that within five years disburses $70B to $80B of green vehicle incentives annually in North America. This opportunity should attract companies well suited to lead and participate in this effort. These corporations won't pass up this major business growth opportunity, and be left behind by competitors who do participate.